

What is claimed is:

1. An isolated SVPH nucleic acid molecule selected from the group consisting of:
 - (a) the DNA sequence selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9;
 - (b) an isolated nucleic acid molecule encoding an amino acid sequence comprising the sequence selected from the group consisting of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, amino acids 1 through 15 of SEQ ID NO:12, amino acids 16 through 188 of SEQ ID NO:12, amino acids 189 through 388 of SEQ ID NO:12, amino acids 389 through 491 of SEQ ID NO:12, amino acids 492 through 675 of SEQ ID NO:12, amino acids 676 through 698 of SEQ ID NO:12, amino acids 699 through 766 of SEQ ID NO:12, amino acids 699 through 787 of SEQ ID NO:13, and amino acids 699 through 820 of SEQ ID NO:14;
 - (c) an isolated nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid sequence of (a) or (b) under conditions of moderate stringency in 50% formamide and 6XSSC, at 42EC with washing conditions of 60EC, 0.5XSSC, 0.1% SDS;
 - (d) an isolated nucleic acid molecule derived by *in vitro* mutagenesis from [SEQ ID NO:1,] SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9;
 - (e) an isolated nucleic acid molecule degenerate from [SEQ ID NO:1,] SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9 as a result of the genetic code; and
 - (f) an isolated nucleic acid molecule selected from the group consisting of human SVPH 1 DNA; an allelic variant of human SVPH 1 DNA; and a species homolog of SVPH 1 DNA.
2. The nucleic acid molecule of claim 1 selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9.
3. A recombinant vector that directs the expression of the nucleic acid molecule of claim 1.
4. An isolated polypeptide encoded by the nucleic acid molecule of claim 1.
5. An isolated polypeptide according to claim 4 having a molecular weight selected from the group consisting of approximately 86,983; 89,459; and 92,781 Daltons as determined by SDS-PAGE.
6. An isolated polypeptide according to claim 4 in non-glycosylated form.
7. Isolated antibodies that bind to a polypeptide of claim 4.
8. A host cell comprising the vector of claim 3.

10. A method for the production of SVPH 4 polypeptide comprising culturing a host cell of claim 9 under conditions promoting expression.

11. The method of claim 10, wherein the host cell is selected from the group consisting of bacterial cells, yeast cells, plant cells, and animal cells.

12. The method of claim 10, wherein the host cell is a mammalian cell.

13. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, amino acids 1 through 15 of SEQ ID NO:12, amino acids 16 through 188 of SEQ ID NO:12, amino acids 189 through 388 of SEQ ID NO:12, amino acids 389 through 491 of SEQ ID NO:12, amino acids 492 through 675 of SEQ ID NO:12, amino acids 676 through 698 of SEQ ID NO:12, amino acids 699 through 766 of SEQ ID NO:12, amino acids 699 through 787 of SEQ ID NO:13, and amino acids 699 through 820 of SEQ ID NO:14.

14. An oligomer comprising a polypeptide of claim 4.

15. An isolated SVPH nucleic acid molecule selected from the group consisting of:

(a) the DNA sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:10, and SEQ ID NO:11;

(b) an isolated nucleic acid molecule encoding an amino acid sequence comprising the sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:15, SEQ ID NO:16, amino acids 1 through 27 of SEQ ID NO:15, amino acids 28 through 193 of SEQ ID NO:15, amino acids 194 through 392 of SEQ ID NO:15, amino acids 393 through 493 of SEQ ID NO:15, amino acids 494 through 685 of SEQ ID NO:15, amino acids 686 through 713 of SEQ ID NO:15, amino acids 714 through 790 of SEQ ID NO:15, and amino acids 714 through 781 of SEQ ID NO:16;

(c) an isolated nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid sequence of (a) or (b) under conditions of moderate stringency in 50% formamide and 6XSSC, at 42°C with washing conditions of 60°C, 0.5XSSC, 0.1% SDS;

(d) an isolated nucleic acid molecule derived by *in vitro* mutagenesis from SEQ ID NO:3, SEQ ID NO:10, and SEQ ID NO:11;

(e) an isolated nucleic acid molecule degenerate from SEQ ID NO:3, SEQ ID NO:10, and SEQ ID NO:11 as a result of the genetic code; and

(f) an isolated nucleic acid molecule selected from the group consisting of human SVPH 4 DNA; an allelic variant of human SVPH 4 DNA; and a species homolog of SVPH 4 DNA

18. An isolated polypeptide encoded by the nucleic acid molecule of claim 15.
19. An isolated polypeptide according to claim 18 having a molecular weight selected from the group consisting of approximately 55,209; 88,923; and 87,990 Daltons as determined by SDS-PAGE.
20. An isolated polypeptide according to claim 18 in non-glycosylated form.
21. Isolated antibodies that bind to a polypeptide of claim 18.
22. Isolated antibodies according to claim 21, wherein the antibodies are monoclonal antibodies.
23. A host cell comprising the vector of claim 17.
24. A method for the production of SVPH 4 polypeptide comprising culturing a host cell of claim 23 under conditions promoting expression.
25. The method of claim 24, wherein the host cell is selected from the group consisting of bacterial cells, yeast cells, plant cells, and animal cells.
26. The method of claim 24, wherein the host cell is a mammalian cell.
27. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:15, SEQ ID NO:16, amino acids 1 through 27 of SEQ ID NO:15, amino acids 28 through 193 of SEQ ID NO:15, amino acids 194 through 392 of SEQ ID NO:15, amino acids 393 through 493 of SEQ ID NO:15, amino acids 494 through 685 of SEQ ID NO:15, amino acids 686 through 713 of SEQ ID NO:15, amino acids 714 through 790 of SEQ ID NO:15, and amino acids 714 through 781 of SEQ ID NO:16.
28. An oligomer comprising a polypeptide of claim 18.
29. An isolated SVPH nucleic acid molecule selected from the group consisting of:
 - (a) the DNA sequence of SEQ ID NO:2;
 - (b) an isolated nucleic acid molecule encoding an amino acid sequence comprising the sequence of SEQ ID NO:5;
 - (c) an isolated nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid sequence of (a) or (b) under conditions of moderate stringency in 50% formamide and 6XSSC, at 42°C with washing conditions of 60EC, 0.5XSSC, 0.1% SDS;

(f) an isolated nucleic acid molecule selected from the group consisting of human SVPH 3 DNA; an allelic variant of human SVPH 3 DNA; and a species homolog of SVPH 3 DNA.

30. The nucleic acid molecule of claim 29, wherein the DNA sequence comprises SEQ ID NO:2.

31. A recombinant vector that directs the expression of the nucleic acid molecule of claim 29.

32. An isolated polypeptide encoded by the nucleic acid molecule of claim 29.

33. An isolated polypeptide according to claim 32 having a molecular weight of approximately 13,938 Daltons as determined by SDS-PAGE.

34. An isolated polypeptide according to claim 32 in non-glycosylated form.

35. Isolated antibodies that bind to a polypeptide of claim 32.

36. Isolated antibodies according to claim 35, wherein the antibodies are monoclonal antibodies.

37. A host cell comprising the vector of claim 31.

38. A method for the production of SVPH 3 polypeptide comprising culturing a host cell of claim 37 under conditions promoting expression.

39. The method of claim 38, wherein the host cell is selected from the group consisting of bacterial cells, yeast cells, plant cells, and animal cells.

40. The method of claim 38, wherein the host cell is a mammalian cell.

41. An isolated polypeptide comprising an amino acid sequence of SEQ ID NO:5.

42. An oligomer comprising a polypeptide of claim 32.